

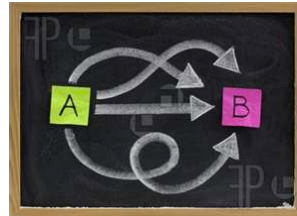
Writing Linear Equations & Linear Systems

3.2 Lesson: Writing Equations Using a Slope and a Point

Unit Question: How can multiple representations lead to the same conclusion?

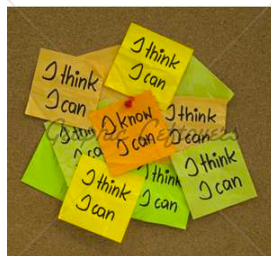
Learner Profile: Open-Minded

Area of Interaction: Human Ingenuity



I Can Statement:

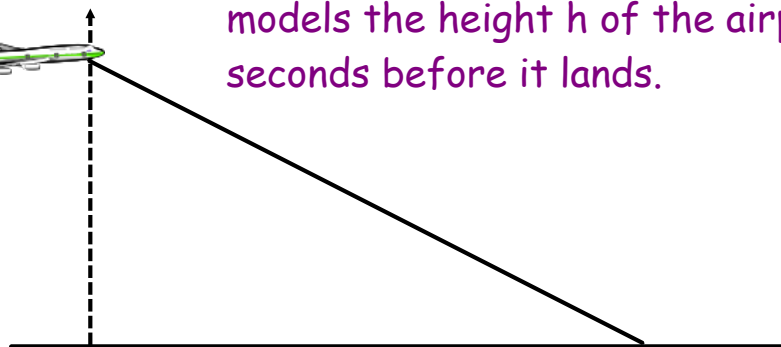
I can write an equation of a line when given the slope and a point.



? Have you seen an airplane come in for a landing either in real life, on the television, or in movies.

? Can you describe in words or with a picture what it looks like.

? If the plane descends 200 feet per second, what is its height 5 seconds before it lands.



Is it possible to write an equation that models the height h of the airplane, t seconds before it lands.

$$h = -200t + 1000$$

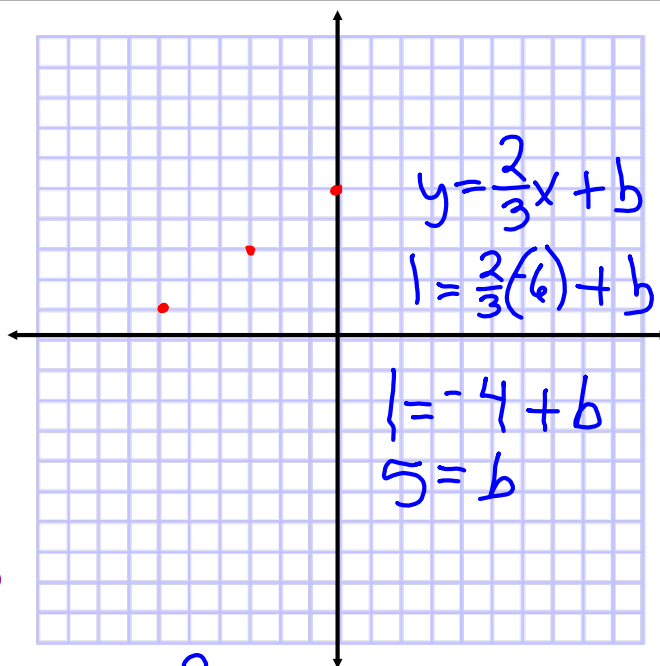
$$m = \frac{2}{3}, (-6, 1)$$

Plot the point.

Is it possible to find additional points on the line? Explain

What is the y-intercept?

So, the equation is $y = \frac{2}{3}x + 5$



$$m = -3, (1, -4)$$

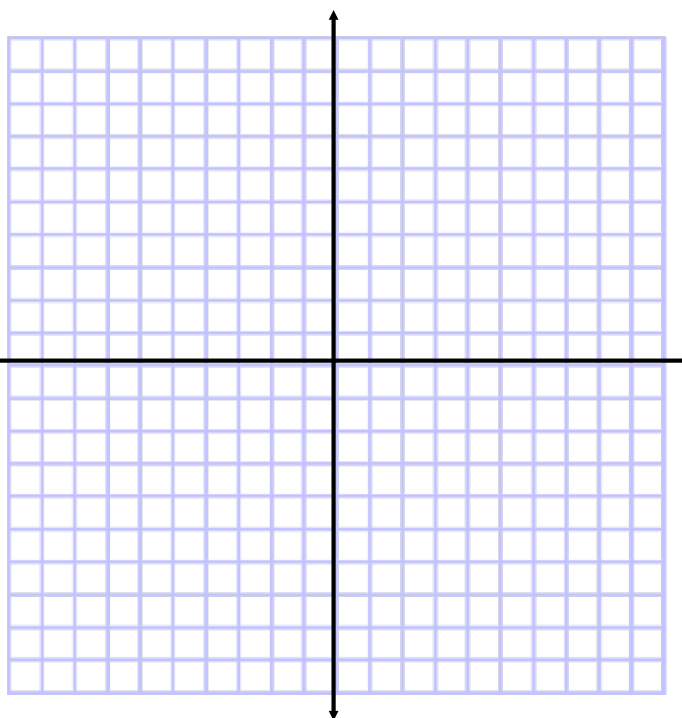
What are the steps to follow to write the equation?

$$y = -3x + b$$

$$-4 = -3(1) + b$$

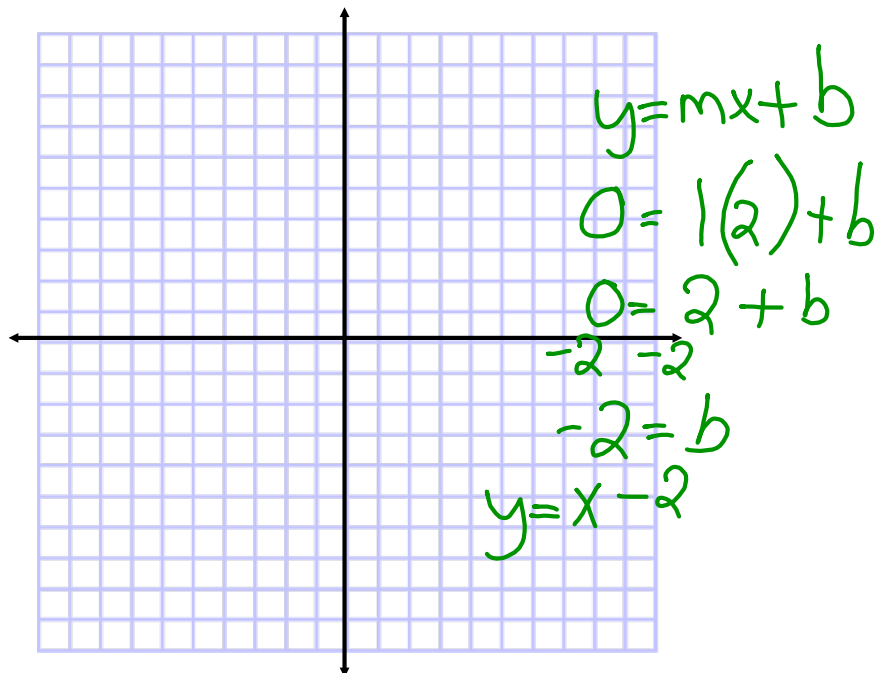
$$-4 = -3 + b$$

$$b = -1$$

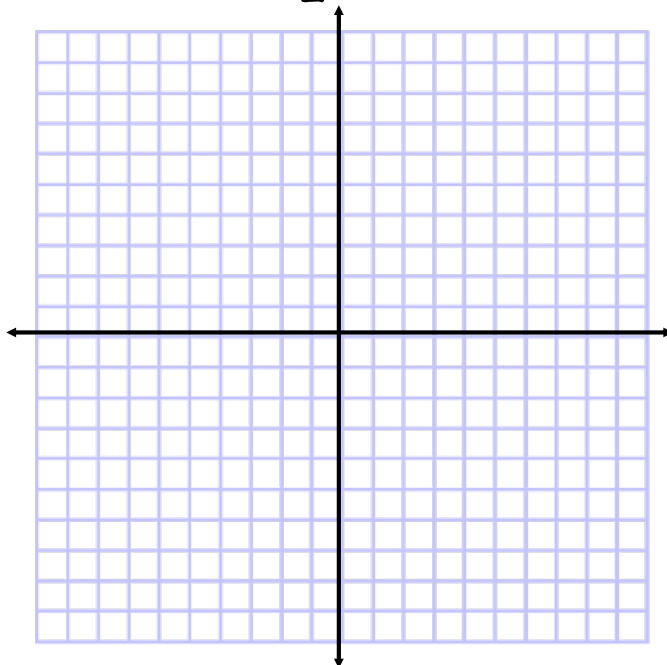


You try:

$$m = 1 \quad (2, 0)$$

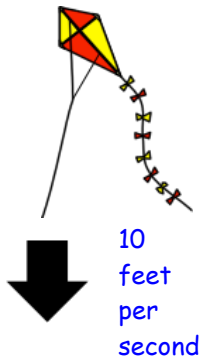


You try again 😊: $m = -\frac{1}{2}$ $(2, 3)$



You finish parasailing and are being pulled back to the boat. After 2 seconds, you are 25 feet above the boat.

Write an equation that represents the height y (in feet) above the boat after x seconds.



What are the steps to write an equation?

At what height were you parasailing?

When do you reach the boat?

Assignment:

p.116-117

1-2, 6-17